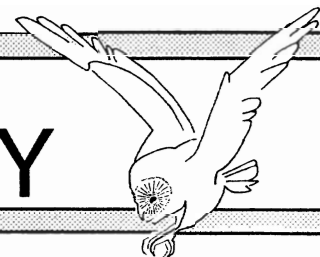


NATURALLY KENTUCKY



Number 5, April 1992

MR. AND MRS. W. G. WIGLESWORTH DONATE LAND FOR NATURE PRESERVE



On December 30, 1991, Mr. and Mrs. W. G. Wiglesworth, Jr. donated 110 acres of land along the Licking River in Harrison County to the Commonwealth of Kentucky. This area, known as Quiet Trails Wildlife Sanctuary, is characterized by high ridges atop rolling hills, steep slopes and ravines, and the low-lying floodplains of the main Licking River. Seven miles of trails wind through fields and woods down to the banks of the river and back to the ridgetops, providing wonderful space for hiking, photography, and environmental education. Along these trails one can observe numerous species of birds, trees and wildflowers, all representatives of the great diversity of Bluegrass fauna and flora.

Quiet Trails was dedicated at the March 4, 1992 meeting of the Kentucky State Nature Preserve Commission. This beautiful area has been used in the past by local schools, scout troops and private organizations, and it will continue to be managed for the primary purpose of environmental education.

STATE NATURE PRESERVE SYSTEM GROWS

In addition to Quiet Trails, the Kentucky State Nature Preserves Commission dedicated three other natural areas into the state nature preserve system at the Commission's March 4 meeting. The Commission now protects a

total of 7,933 dedicated acres within 27 preserves in 20 counties.

The Nature Conservancy agreed to dedicate 1,088 acres at Bad Branch Gorge in Letcher County. This additional acreage joins the Commission's 435 acres currently protected as Bad Branch State Nature Preserve. The Nature Conservancy, which will retain ownership and jointly manage the preserve with the Commission, dedicated the site to provide the highest level of land protection possible. The newly dedicated area protects the majority of the Bad Branch watershed above the waterfall on the south face of Pine Mountain. In addition to a breathtaking view atop the sandstone cliff known as High Rock, the area contains a high concentration of rare species such as *Leucothoe recurva* (fetterbush), *Corydalis sempervirens* (pale corydalis) and *Listera smallii* (kidney-leaf twayblade).

Kingdom Come State Park Nature Preserve consists of 225 acres on the north slope of Pine Mountain located within Kingdom Come State Park. The dedication of this site reflects the cooperative atmosphere between the Kentucky Department of Parks and the Commission. This natural area is a good example of a mesic forest and contains Line Fork Cave, the state's third largest hibernaculum for the federally endangered *Myotis sodalis* (Indiana bat). In order to protect the bats during hibernation, the entrance to the cave was gated in July of 1991 as a joint project between several state and federal agencies.

Thompson Creek Glades State Nature Preserve is a 64-acre natural area located in Larue County. The preserve contains several high quality limestone glade openings. Such glades are formed when limestone bedrock outcrops at the surface. Many species of prairie and glade plants grow in this harsh, dry environment. *Aster sericeus* (western silky aster) is one rare plant located at this unique site.

Contact Joyce Bender, Stewardship Coordinator, for more information regarding these new state nature preserves.

VOLUNTEERS IN ACTION

Last year the Stewardship program accomplished a great deal. We couldn't have done it without the support of our volunteers. Several other groups organized volunteer activities that benefited state nature preserves as well. The volunteer spirit is on the rise in Kentucky!

Participants of the Thirteenth Annual Jesse Stuart Weekend held at Greenbo Lake State Resort Park on September 27-28 were treated to guided hikes at the Jesse Stuart State Nature Preserve in Greenup County. Our thanks go to volunteers Dr. Roland Burns and Mark and Jennifer Hamilton, who helped lead these hikes and interpreted the landscape that inspired Stuart's writing.

On October 19, volunteers spent a beautiful fall day constructing a loop trail at Metropolis Lake State Nature Preserve in McCracken County. Many thanks to Wava and Jerry Grandon, David and June Nelson, Denny and Lisa Alvey, Bill Flynn and Ron Jordan. The trail will be completed this summer with the construction of an elevated boardwalk through the floodplain portion. We also want to acknowledge Andy Crabtree, an engineer for Martin Marietta, who is spending his free time as our consultant with the planning of the boardwalk and an observation platform at Metropolis Lake.

September 7 found Bob Burns, Ruth Eubanks, Linda and Harry Kuddes, Dave Luzader, Carol Milburn, William Stoll, George Wolsing, Bob and Ruth Matheny constructing water bars at Boone County Cliffs State Nature Preserve. The preserve was once again buzzing with activity on November 16 when Linda Altevers, Nancy Emmons, Kevin Flowers, Linda Kuddes, Carol Milburn, Nancy Parke, Leon Pierson, Gayle Pille, Sharon and Dale Reichert and Judy Sutter turned out on an overcast day to remove exotics (bush honeysuckle, privet, and mahaleb cherry) and install water bars on a steep part of the trail that was showing signs of erosion. Our appreciation goes to all these hardworking volunteers and especially to Bob and Ruth Matheny for organizing The Nature Conservancy members into such a dedicated team.

Nancy Theiss, Director of the Louisville Nature and Conservation Center (the organization that now manages Beargrass Creek State Nature Preserve in Jefferson County), organized a cleanup of a two-mile stretch of the South Fork of Beargrass Creek. This "Beargrass Sweep" focused on a two-mile portion from the Louisville Zoological Gardens at Trevillian Way to Eastern Parkway. This area includes the stretch of Beargrass Creek that borders the nature preserve. Over 300 volunteers turned out on November 2 to participate in the cleanup. Co-sponsoring the event were Operation Brightside, the Louisville Zoo, Target Department Stores, Quest Outdoors,

Waste Management Inc., Coors Clearwater 2000, and the Metropolitan Sewer District. Thanks to Nancy and all those involved in helping to make Beargrass Creek a cleaner stream.

Our thanks go out to mobile volunteers Andy Mullarky and Lisa Laverdure. Andy spent a week traveling with assistant preserve manager, Kris Snyder. He helped post boundaries at John James Audubon State Park Nature Preserve in Henderson County and Axe Lake State Nature Preserve in Ballard County. He also assisted with hazardous waste assessments and landowner interviews at two potential acquisition sites. Lisa accompanied Kris to Pilot Knob State Nature Preserve in Powell County and Jesse Stuart State Nature Preserve where she assisted with boundary posting.

We wish to express our gratitude to Tom Ress, who has been our preserve monitor at Pilot Knob State Nature Preserve in Powell County since October. He has become invaluable in the months since then. His frequent preserve inspections keep us up to date on conditions at the preserve. Tom has also been busy serving as a volunteer recruiter for other projects at the preserve.

On February 22, Reuben Ferguson, Michelle Cockriel, Chris Hunsinger, Bruce Scott, Mark Comer, Ed Craft, Ward and Kaylen Wilson, James and Josephine Puckett, Bob Coakley, Annette Jones, Julie Price, Joan Noel and Thom Puckett turned out to help extend the existing trail at Vernon-Douglas State Nature Preserve. Visitors to the preserve this spring will be able to enjoy a two mile (round-trip) hike. This trail, which climbs to the ridgetops surrounding Hall Hollow, is moderately strenuous. We are grateful to all these volunteers who made the workday such a success.

We would also like to thank Rachel Hannan for her help as an office assistant.

VOLUNTEERS



JACKSON PURCHASE INVENTORY COMPLETED

A two year biological and natural areas inventory of the Mississippi Alluvial Plain and Gulf Coastal Plain (more commonly known as the Jackson Purchase) in western Kentucky was completed by Commission biologists in 1991. The project, funded by the Kentucky Department of Fish and Wildlife Resources, focused on finding occurrences of rare plants and terrestrial animals as well as locating remaining natural areas.

Biologically, the Jackson Purchase is best known for its remnant cypress-tupelo swamps and bottomland hardwood forests which once covered tens of thousands of acres and occurred throughout the Mississippi and lower Ohio river bottoms and their tributaries. However, at the time of settlement the Jackson Purchase also contained extensive tallgrass prairies, rich, mesophytic forests, oak-hickory forests and flatwoods, a unique type of forest developed on soils that have a fragipan (impermeable layer which restricts drainage, creating wet conditions in the winter and spring and very dry conditions in the summer/fall).

What Commission biologists found (or didn't find) was frightening. Although the Jackson Purchase had never been systematically searched for natural areas, very few significant natural areas of any size were discovered. Previously known natural areas such as Murphy's Pond and Axe Lake Swamp were revisited to confirm their importance but new natural areas were few and far between. In fact, of the more than 1.5 million acres which comprise the Jackson Purchase, only 28 natural areas encompassing 25,000 acres were considered to be significant. This means that only 1.6% of the Jackson Purchase remains similar to what it looked like when John James Audubon visited it in 1810 and saw huge flocks of trumpeter swans. The most amazing thing about this number is that it is larger than most other areas of Kentucky which often have less than 0.5% considered to be high natural quality.

Ninety-one animals (not including aquatic species) and 94 plants considered rare in Kentucky by the Commission are known from the Jackson Purchase. The inventory produced 107 new records for rare animals and 61 new records for rare plants. This increased our knowledge of the abundance and distribution of these species significantly which, in turn, will help us to determine protection priorities for these species.

Highlights of the inventory include the discovery of the federally endangered Indiana myotis (Indiana Bat) in three counties, seven great blue heron colonies, the second confirmed nesting record for the brown creeper, several new plant species previously unknown in Kentucky, 15 new county records for rare plants and numerous significant range extensions for plants and animals.

Kentucky Mussels: Going, Going.....

In conjunction with Eastern Kentucky University and Virginia Polytechnic Institute scientists, the Commission recently published a report on the freshwater mussels of Kentucky. Information for the report was derived from an examination of specimens housed at museums with major collections, a review of published information, and collections made by Commission personnel. The report revealed that 103 species of mussels have been collected from Kentucky's streams. This is about one-third of the 297 kinds found in North America, the home of the richest mussel fauna in the world. Only Alabama and Tennessee support a greater array of mussels than Kentucky.

During the last 200 years, human activities have greatly altered Kentucky's waters and landscape, and adversely affected our mussel fauna. Of Kentucky's 103 species, 18 are presumed extinct or have been extirpated from the state, and about 35 additional species are rare. Only about one-half of our mussel fauna currently is not considered rare! In addition to those already lost, a large number of our rare mussels are on the verge of extirpation from the state or extinction. Many of these will probably be lost as part of our natural heritage through the continuing degradation and loss of their stream habitats and because we lack the funding, expertise, and information needed to save them. Kentucky's mussel fauna is perhaps the most endangered group of organisms in the state.

These losses are not without significance. Mussels are long-lived and excellent indicators of water quality and the health of our streams. They are eaten by other animals such as muskrats and raccoons, clean the water as they respire and feed, and are the raw material for the Japanese cultured pearl industry.

Although the mussel faunas of essentially all of our streams have been reduced in diversity, some have fared worse than others. Of 72 kinds of mussels that once inhabited the upper Cumberland River drainage downstream from Cumberland Falls, one-half are now extinct, extirpated from the state, or no longer occur in the drainage. Several of those that still persist are rare in Kentucky or nationally. In contrast, while the Licking River downstream from Cave Run Dam and the upper Green River have lost several species, each continues to support diverse mussel faunas.

Activities that adversely affect mussels include, but are not limited to, the impoundment of streams, reservoir construction and the operation of dams, stream dredging and channelization, and poor agriculture, logging, and strip mining practices that add silt, sediment, and associated pollutants to our waters. Despite these problems, we can (CONTINUED ON PAGE 5)

VOLUNTEER OPPORTUNITIES

Although 1991 was certainly our most productive year, we still have a long way to go. Faced with state-imposed cutbacks, the Stewardship program will rely even more on volunteer assistance in the coming year. We have scheduled the following workdays for the coming months. Please check off the ones you can attend and return to Cindy Campbell, Volunteer Coordinator, Kentucky State Nature Preserves Commission, 407 Broadway, Frankfort, Kentucky 40601 or call Cindy at (502) 564-2886.

____ May 16, 1992
Flat Rock Glade State Nature Preserve (Simpson County)
(Trail construction and cleanup.)

____ June 27, 1992
Metropolis Lake State Nature Preserve (McCracken County)
(Boardwalk construction.)

____ June 20, 1992
Metropolis Lake State Nature Preserve (McCracken County)
(Boardwalk construction.)

____ July 18, 1992
Blue Licks State Park Nature Preserve (Robertson County)
(Exotic species removal.)

Name: _____ Phone: _____

Address: _____

Watch for the first edition of our Stewardship newsletter in July. The newsletter, staggered with the Commission's "Naturally Kentucky" newsletter, will serve as a medium for our volunteer network. It will be sent to all supporters of the Commission.

F.Y.I. June 1st is the official kick-off of Kentucky's Bicentennial Celebration. Keep an eye on the July newsletter and your local newspaper for dates and places of Commission sponsored events.

KENTUCKY STATE NATURE PRESERVES FUND

The Commission's basic mandate is to inventory the Commonwealth for natural areas and to preserve those remnants by establishing a statewide nature preserve system. An important source of funding for protection and acquisition of natural areas comes from donations to the Commission. The beauty of Kentucky's landscape and wealth of plants and animals greeted early settlers. Today, Kentucky is home to over three million people. As we have settled the land and developed our cities, highways, and farmland, native plants and wildlife have retreated to the few wild places that still exist. These last vestiges of wilderness are all that remain of our natural heritage and must be protected now before they are lost to us forever.

Contributions to this fund will be used for the acquisition and protection of endangered species habitat and significant natural areas.

My contribution is \$ _____.

I would like more information about the Kentucky's nature preserve system. _____

Name: _____

Address: _____

Please return this form with your contribution or request for information to:

The Kentucky State Nature Preserves Commission
407 Broadway, Frankfort, KY 40601

KENTUCKY MUSSELS continued...

Have some segment of our mussel fauna and other aquatic organisms by protecting Kentucky's streams. And we can all participate in the conservation of our streams by reducing the demands we place on them, by educating ourselves about the problems and issues they face, and by becoming involved at all levels in efforts to protect Kentucky's best remaining streams from further degradation.

BAD BRANCH MANAGEMENT PLAN

The Division of Water funded the development of a Biological Inventory and Management Plan for one of their Wild Rivers - Bad Branch. The Wild Rivers are nine of Kentucky's most undisturbed streams that are protected by statute and administered by the Wild River Program in the Division of Water. Bad Branch flows down the south face of Pine Mountain in Letcher County in the southeast corner of the state. KSNPC owns a 435 acre nature preserve, Bad Branch State Nature Preserve, within the watershed. The Nature Conservancy owns an additional 1194 acres within the wild river corridor.

Highlights of Bad Branch are a 60 foot waterfall and a sandstone outcrop on the top of the mountain, "High Rock", that provides a spectacular view of the surrounding area. A steep, 3.5 mile hike along a newly completed trail will take you from the mouth of Bad Branch to High Rock. Bad Branch also has a diverse array of plants and animals including 4 rare animal and 16 rare plant species.

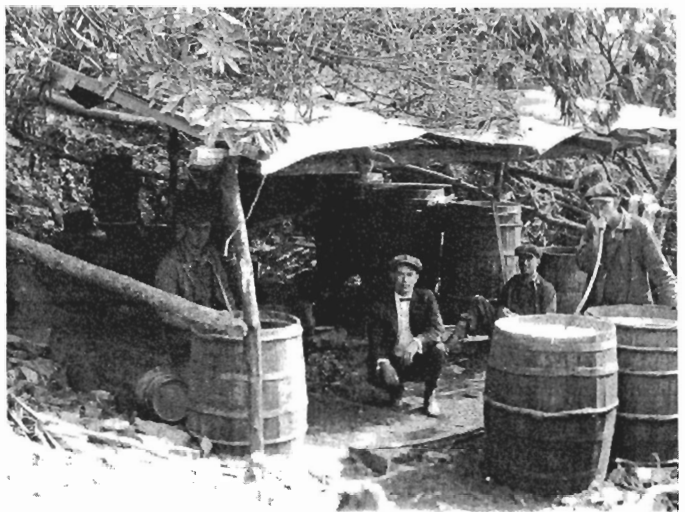
As well as completing a biological inventory of the area, historical use of the area was gathered by interviewing local citizens. Memories of Bad Branch include a busy time during Prohibition when as many as five stills producing moonshine whiskey were active in the area. Remains of some of the stills are still present. Many myths surround the area; some say that silver was found near High Rock and that it still remains hidden in the area. Others believe that there is a bottomless pit just north of High Rock, the Bull Hole. The Bull Hole is actually almost 50 feet deep. The most significant activity in the area was logging, which occurred in the 1940's. Despite this severe disturbance, the area is slowly returning to its pre-logging condition. The Management Plan will be submitted to the Division of Water by May 31, 1992.



KSNPC Stewardship Staff - Joyce Bender, Cindy Campbell and Kris Snyder

KRIS SNYDER JOINS COMMISSION STAFF

Kris Snyder joined our staff in November as our assistant preserve manager. She has been travelling to the far reaches of Kentucky to post preserve boundaries and to assess the environmental condition of properties the Commission would like to acquire. She is maintaining a much needed presence on our state nature preserves. Kris recently graduated from the University of Kentucky where she earned her M. S. degree in Biology, specializing in Plant Ecology.



BAD BRANCH STILL

Commission Acquisition of Goodrum Cave to Protect Endangered Gray Bats

The Commission's acquisition of Goodrum Cave in Allen County is nearly complete. The event represents KSNPC's first purchase of a cave for the protection of an endangered bat species. The cave entrance and approximately 45 acres of surrounding forest land are being acquired.

The gray bat is one of three federally endangered bats that are found in Kentucky. The entire region's population of more than 200,000 gray bats spend each winter hibernating in a single cave in Edmonson County. In the spring they disperse to caves throughout much of central Kentucky and probably farther north into southern Indiana and Illinois, as well as south into Tennessee. Females gather in large numbers at a select few caves to raise their young while the males use other "bachelor" caves.

As many as 30,000 female gray bats may use a single cave to raise their young. Usually there is one favored site within each cave that offers the right combination of temperature and humidity to suit the bats.

The females give birth to the naked young and soon begin nursing them. After only a day or so the young are left to hang on the ceiling for several hours each night as the females emerge from the cave to feed along streams and the margins of reservoirs. Upon their return, each female is able to find her young amidst a squirming mass of hundreds or even thousands of tiny bats all ready to nurse. Within two months, most of the young are on the wing, accompanying the females on their nightly forays.

A 1989 survey of Kentucky caves used by gray bats as maternity sites conducted for the Nongame Wildlife Program of the Kentucky Department of Fish and Wildlife Resources indicated that Goodrum Cave was one of the six most important known maternity sites in Kentucky. At that time, the Commission began investigating the possibilities for protecting them, and Goodrum Cave is the first of these projects to be seen to successful completion. Thanks to the willingness of landowners Stanley and Oscar Conner to work with the Commission, and sell part of their farms, the bat's summer home will be protected for generations to come.

Another of the six, Rider's Mill Cave in Hart County, is protect-

ed jointly by the Commission and The Nature Conservancy in cooperation with the landowner who participates in the Kentucky Natural Areas Registry Program.

**Kentucky State Nature
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(502)564-2886

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